



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,561	04/14/2004	Randall J. Calistri-Yeh	55653-015	4812

7590 10/26/2006
McDermott, Will & Emery
600 13th Street, N.W.
Washington, DC 20005-3096

EXAMINER

PANNALA, SATHYANARAYA R

ART UNIT PAPER NUMBER

2164

DATE MAILED: 10/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No.	Applicant(s)	
	10/823,561	CALISTRI-YEH ET AL.	
	Examiner	Art Unit	
	Sathyanarayan Pannala	2164	

All participants (applicant, applicant's representative, PTO personnel):

(1) Sathyanarayan Pannala. (3) _____.

(2) W. Nicholas Chen. (4) _____.

Date of Interview: 24 October 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____.

Claim(s) discussed: 29.

Identification of prior art discussed: N/A.

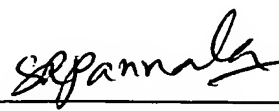
Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant faxed a proposed amendment for claim 29, and discussed the 35 U.S.C. 101 rejection. Applicant has been suggested to look into MPEP 2106 to get a better idea to amend the claims to over come the rejection under 35 U.S.C. 101. Examiner specifically explained how to over come the 101 rejection of claim 29. While dicussing the claim limitations, Applicant expressed to submit a terminal disclaimer, because amended limitations are same as the earlier issued patent independent claims.

McDermott Will & Emery

Boston Brussels Chicago Düsseldorf London Los Angeles Miami Munich
New York Orange County Rome San Diego Silicon Valley Washington, D.C.

FACSIMILE**Date:** October 23, 2006**Time Sent:**

To:	Company:	Facsimile No:	Telephone No:
Examiner Sathyanaraya R. Pannala	U.S. Patent and Trademark Office	1.571.273.4115	
From:	W. Nicholas Chen	Direct Phone:	650.813.5092
E-Mail:	nchen@mwe.com	Direct Fax:	650.813.5100
Sent By:	Patricia A. Balero	Direct Phone:	650.813.4608
Client/Matter/Tkpr:	055653-0015/9341	Original to Follow by Mail:	No
		Number of Pages, Including Cover:	3

Re: For Interview on October 24, 2006**Message:**

The information contained in this facsimile message is legally privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, or copy of this facsimile is strictly prohibited. If you have received this facsimile in error, please notify us immediately by telephone and return the original message to us at the below address by mail. Thank you.

IF YOU DO NOT RECEIVE ALL OF THE PAGES, PLEASE CALL AS SOON AS POSSIBLE.

Main Facsimile: 202.756.8087 Facsimile Operator: 202.756.8090

U.S. practice conducted through McDermott Will & Emery LLP.
600 Thirteenth Street, N.W. Washington, D.C. 20005-3096

Telephone: 202.756.8000

LIE: Do not enter 888/10/24/06

**INFORMAL
FOR DISCUSSION PURPOSE ONLY**

Docket No.: 55653-015

PATENT

In re Application of

Customer Number: 20277

Randall J. CALISTRI-YEH, et al.

Confirmation Number: 4812

Application No.: 10/823,561

Group Art Unit: 2164

Filed: April 14, 2004

Examiner: Sathyanaraya R. Pannala

For: CONSTRUCTION OF TRAINABLE SEMANTIC VECTORS AND CLUSTERING,
CLASSIFICATION, AND SEARCHING USING A TRAINABLE SEMANTIC VECTOR

INTERVIEW AGENDA/PROPOSAL

Dear Sir:

Thank you for granting a telephone interview which is to be taking place on October 24, 2006. Per your request, an interview agenda/proposal is attached. Proposed amendment to claim 29 is also attached. If the proposed amendment is acceptable, similar changes will be made to other independent claims.

29. A method for a data processing system to efficiently cluster of clustering data points from a dataset-dataset, the method comprising the machine-executed steps steps:

constructing a trainable semantic vector for each data point from the dataset in a multi-dimensional semantic space; and

applying a clustering process to the constructed trainable semantic vectors to identify similarities between groups of data points within the dataset-dataset;

wherein the trainable semantic vector for each data point from the dataset is constructed by the machine-executed steps of:

for each data point, identifying a relationship between each data point and predetermined categories corresponding to dimensions in the semantic space;

determining the significance of each data point with respect to the predetermined categories; and

constructing a semantic vector for each data point, wherein each semantic vector has dimensions equal to the number of predetermined categories and represents the relative strength of its corresponding data point with respect to each of the predetermined categories.

The Rejection under 35 U.S.C. §101 Is overcome

Claims 29-40, 62, 68 and 72-74 were rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. The rejection is overcome.

It is submitted that the claims are not directed solely to mere ideas, laws of nature, or natural phenomena. Each of the claims falls squarely into one of the classes of subject matter permitted by 35 U.S.C. § 101, that is to say process or machine, respectively. Independent claim 29 and 2, for example, are tied to machine-executed steps or a data processing system (machine). Independent claim 68 recites a tangible machine-readable medium, in conformity with *In re*

Application No.: 10/823,561

**INFORMAL
FOR DISCUSSION PURPOSE ONLY**

Beauregard, 53 F.3d 1583, 35 USPQ2d 1383 (Fed. Cir. 1995). According to the *Beauregard* decision, computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. §101.

Also, as amended, each of the independent claims describes a process to efficiently cluster data points from a dataset, such as documents, to identify similarities between groups of data points within the dataset. The described steps specify unique steps for constructing a semantic representation (trainable semantic vector) for each data point, and cluster or group the data points to identify similarities between the data points according to the trainable semantic vectors. The process and system are not mere abstract concept or mathematical formula. Rather, the process and system provide useful applications. It is respectfully submitted that generating trainable semantic vectors for data points and clustering/grouping the data points based on the generated trainable semantic vectors allow efficient grouping of data, which improves a machine's efficiency in identifying or retrieving data. Accordingly, the claims describe process that creates a "useful, concrete and tangible result" analogous to the transformation of discrete dollar amounts into a final share price, which the Federal Circuit found to be a sufficiently "useful, concrete and tangible result" in *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998) by applying mathematical conversions to transforming data. Furthermore, constructing a semantic representation (trainable semantic vector) for each data point, and clustering or grouping the data points to identify similarities between the data points according to the trainable semantic vectors produce a "useful, non-abstract result" analogous to the method of adding a data field with information on long distance providers, which the Federal Circuit found to be a "useful, non-abstract result that facilitates differential billing of long-distance calls," which "fall[s] comfortably within the broad scope of patentable subject matter under §101." *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999).

Additionally, the issuance of Bradford (U.S. Patent No. 6,954,750) and Dailey (U.S. Patent No. 6,917,952) patents, both of which describe data clustering and were cited in the Office Action, confirms that the USPTO has long considered that the technologies as claimed in the instant application are directed to patentable subject matter.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Wei-Chen Nicholas Chen

Registration No. 56,665

TEL: 650-813-5092